**Business problem**

In recent years, city hotel an resort hotel have seen high cancellation rates. Each hotel is now dealing with a number of issues as a result, including fewer revenues and less than ideal hotel room use. Consequently, lowering cancellation rates is both hotels’ primary goal in order to increase their efficiency in generating revenue, and for us to offer thorough business advice to address this problem.

The analysis of hotel booking cancellations is well as other factors that have no bearing on their business and yearly revenue generation are the main topics of this report.

**Assumption**

1. No unusual occurrences between 2015 and 2017 will have a substantial impact on the data used.
2. The information is still current and can be used to analyse a hotels possible plan in an efficient manner.
3. There are no unanticipated negatives to the hotel employing any advised technique.
4. The hotels are not currently using any of the suggested solution.
5. The biggest factor affecting the effectiveness of earning income is booking cancellations.
6. Cancellations results in vacant rooms for the booked length time.
7. How will hotels be assisted in making pricing and promotional decisions?

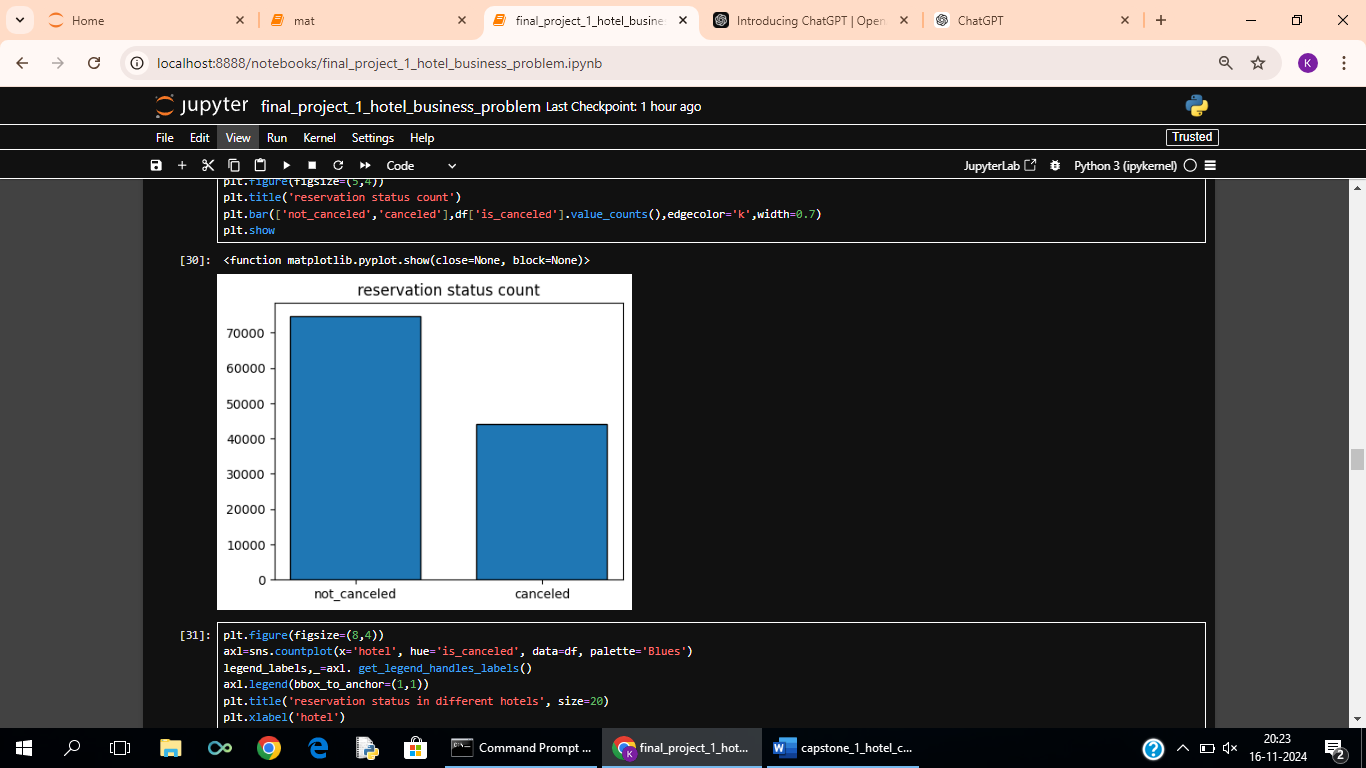
**Research question**

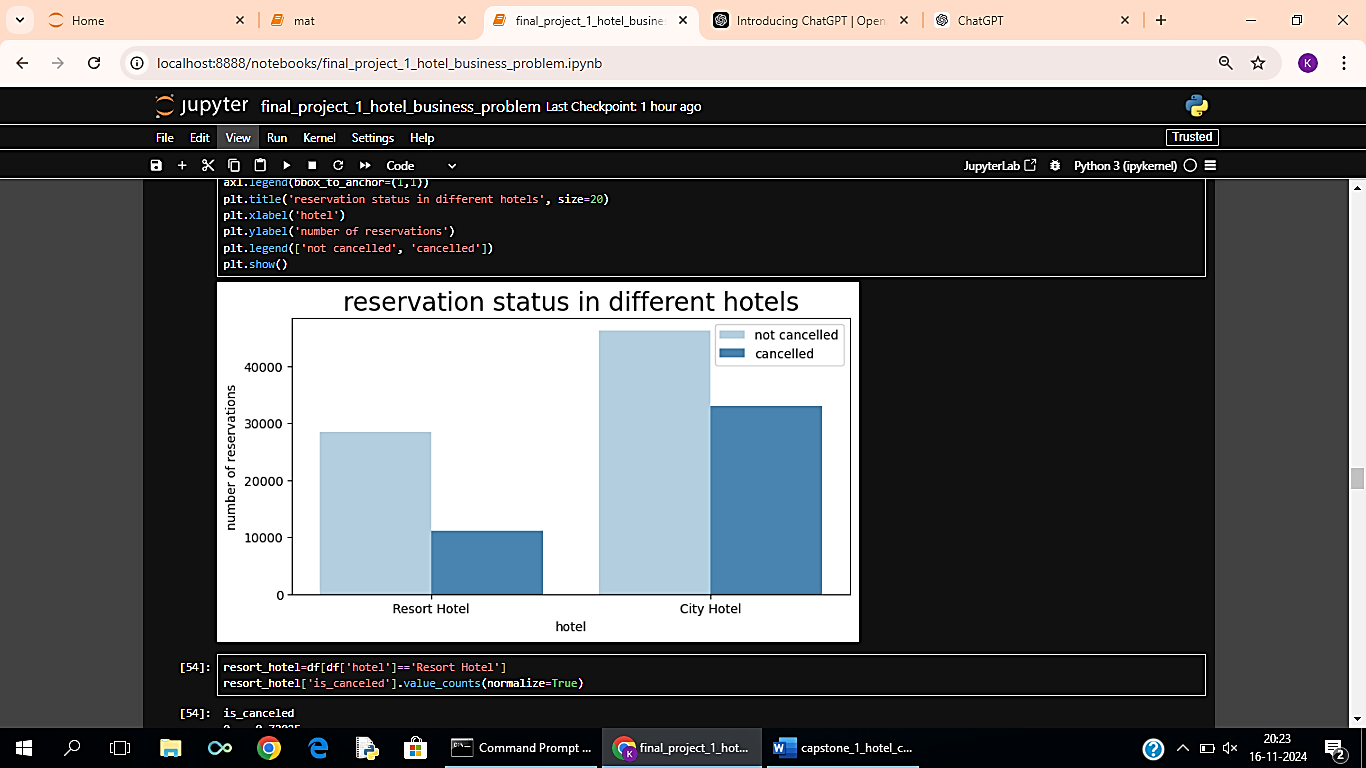
1. What are the variables that affect hotel reservation cancellation?
2. How can we make hotel reservations cancellations better?
3. How will hotel be assisted in making pricing and promotional decisions?

**Hypothesis**

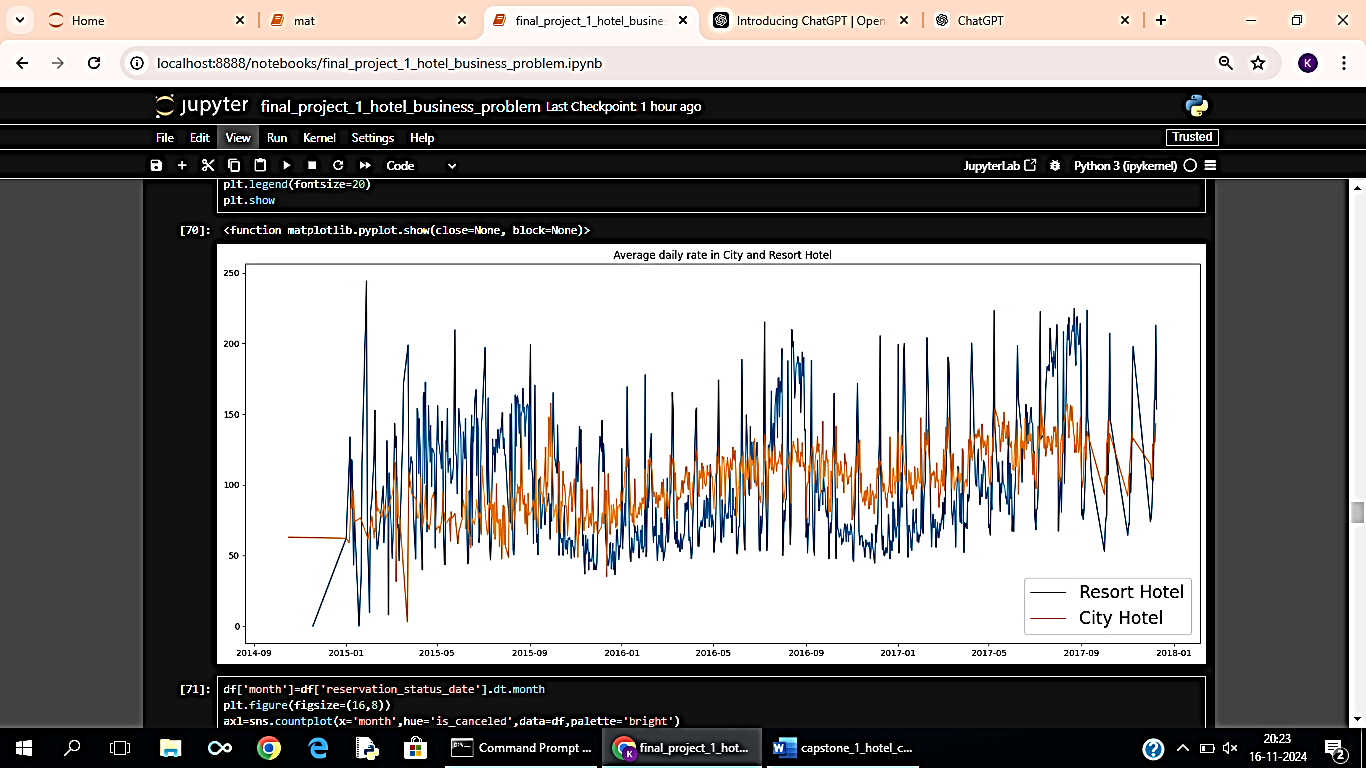
1. More cancellations occur when prices are higher
2. When there is a longer waiting list, customer tend to cancel more frequently.
3. The majority of clients are coming from offline travel agent to make their reservation.

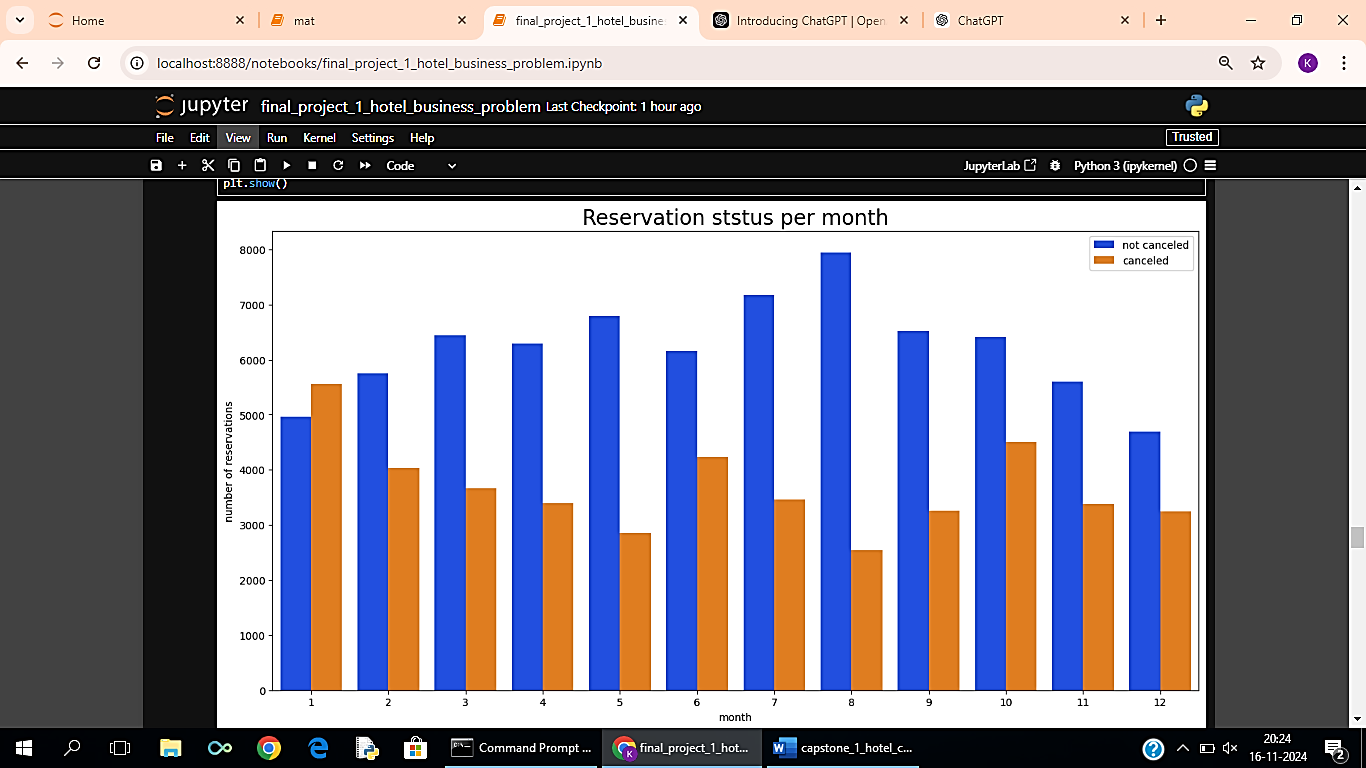
**Analysis and findings**

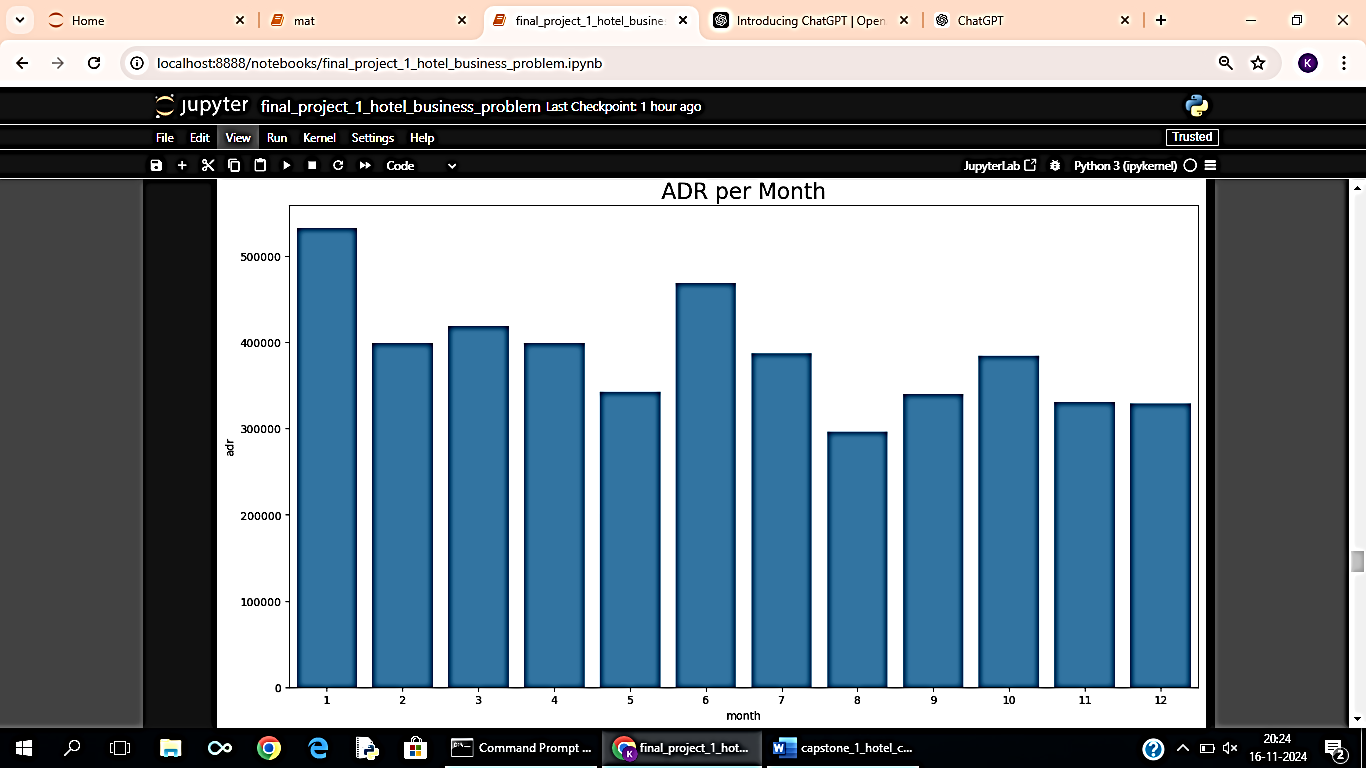
The accompanying bar graph shows the percentage of percentage of reservations that cancelled and those that are not. It is obvious that there are still a significant number of reservations that have not been cancelled. There are still 37% of the clients who cancelled their reservation, which has significant impact on the hotels’ earning.

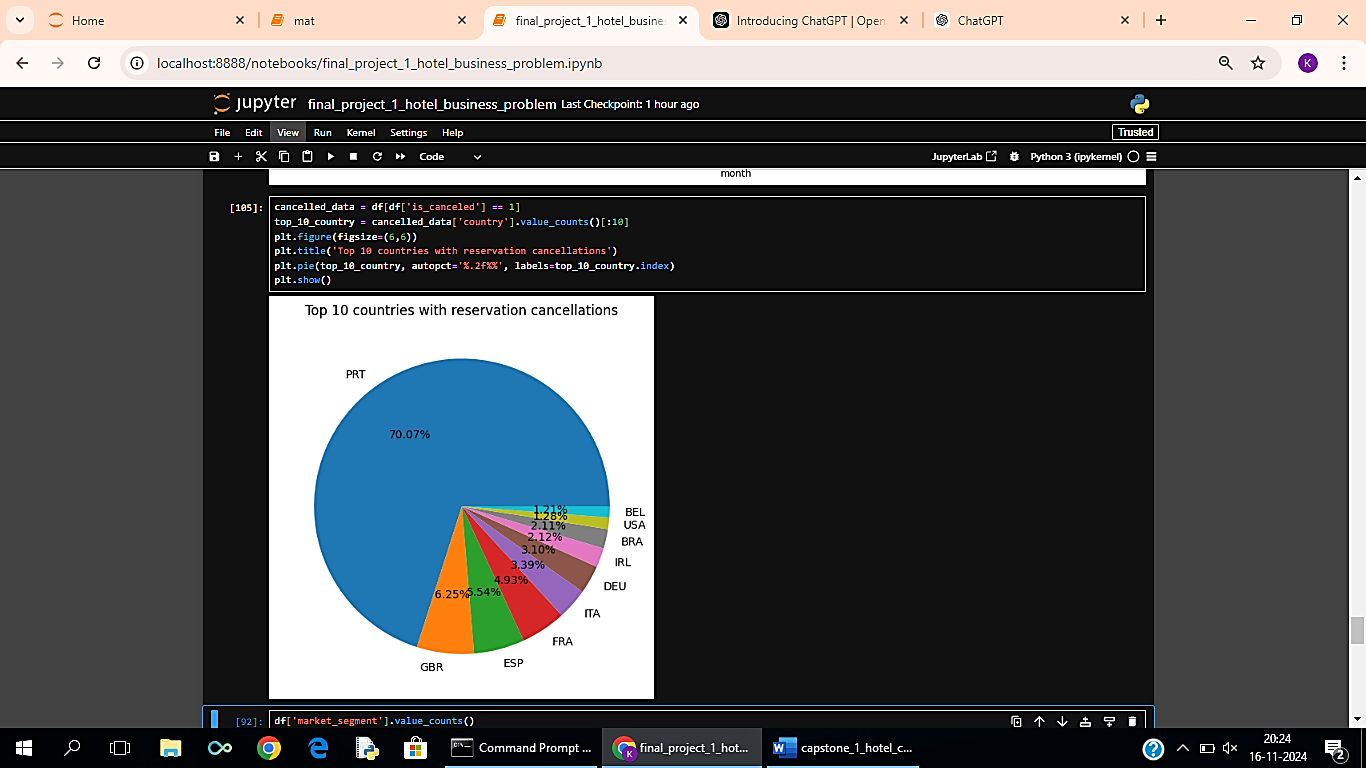


In comparison to resort hotels, city hotels have more bookings. Its possible that resort hotels are more expensive than those in cities.

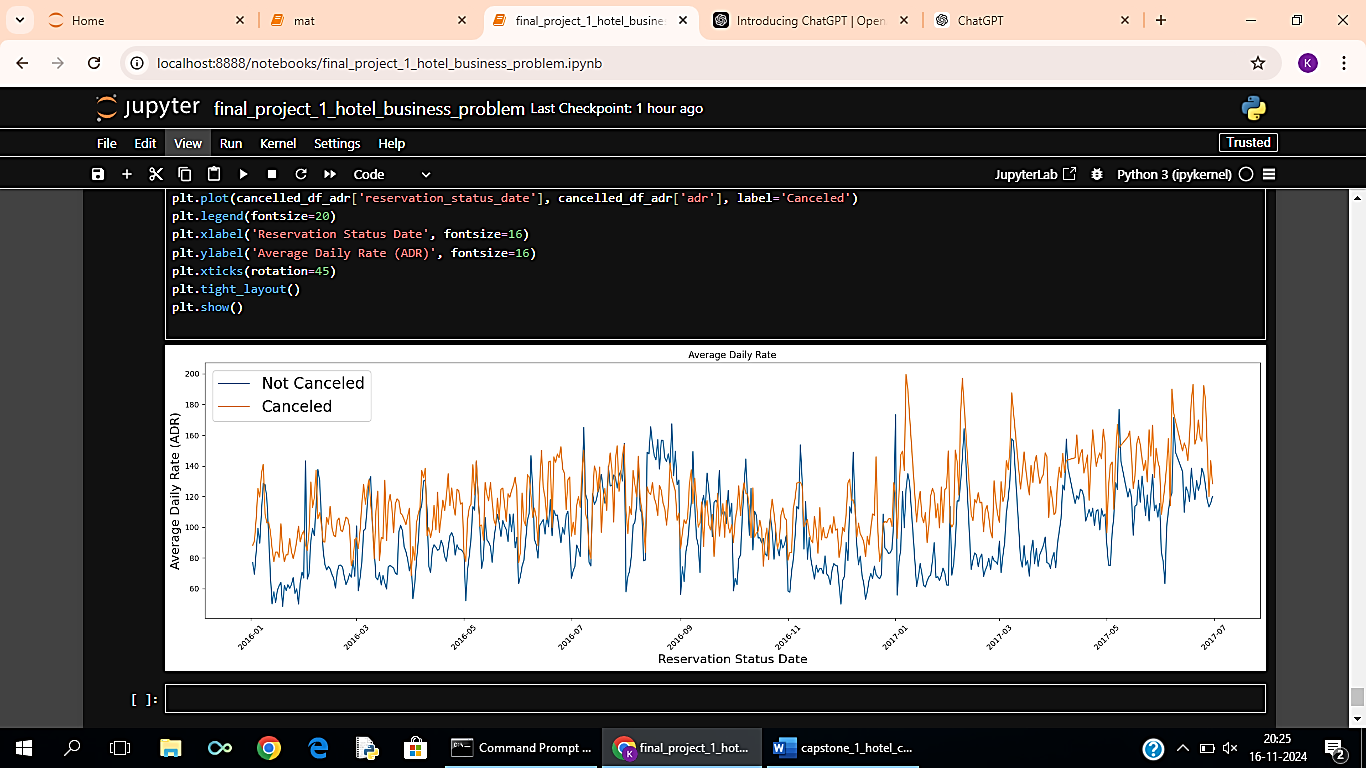
**Average daily rate in city and resort hotel**

The line graph above shows that, on certain days, the average daily rate for a city hotel is less than that of a resort hotel, and on other days, it is even less. It goes without saying that weekends and holidays may see a rise in resort hotel rates.

We have developed the grouped bar graph to analyse the moths with the highest and lowest reservation levels according to reservation status. As can be seen, both the number of the confirmed reservations and the number of the cancelled reservations are largest in the month of august, whereas January is the month with the most cancelled reservation.

This bar graph demonstrates that cancellation is most common when prices are greatest and are least common when they lowest. Therefore, the cost of the accommodation is solely responsible for the cancellation.

Let’s check the area from where guests are visiting the hotels and making reservations. Is it coming from direct or groups. Online or offline Travel Agent? Around 46% of the clients come from online travel agencies, whereas 27% come from groups. Ony 4% of clients book hotels directly by visiting them and making reservations.



As seen in the graph, reservations are cancelled when the average daily rate is higher than when it is not cancelled. It clearly proves all the above analysis, that the higher price leads to higher cancellation.

**Suggestions**

1. Cancellation rates as the price does. In order to prevent cancellations of reservations, hotels could work on their pricing strategies and try to lower rates specific hotels based on locations. They can also provide some discounts to the consumers.
2. As the ratio of the cancellation and not cancellation of the resort hotel is higher in the resort hotel than the city hotels. So, the hotels should provide a reasonable discount on the room prices on weekends or on holidays.
3. In the month of January, hotels can start campaigns or marketing with a reasonable amount to increase their revenue as the cancellation is the highest in this month.
4. They can also increase the quality of their hotels and their services mainly in Portugal to reduce the cancellation rate.